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| 09/802,734 | 03/09/2001 | Trudy D. Stetzler | TI-30668 | 7656 |

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| EXAMINER |
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CORRIELUS, JEAN B

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| ART UNIT | PAPER NUMBER |
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2611

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 03/07/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/802,734

Applicant(s)

STETZLER ET AL.

Examiner

Jean B Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-9, 11, 14, 18, 23, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-9, 11, 14, 18, 23, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 6-9, 11, 14, 18, 23, and 25-26 is withdrawn in view of the newly discovered reference(s) as applied in the rejection below.

Claim Objections

2. Claims 6-9, 18, 23, 25 and 26 are objected to because of the following informalities: claim 6, line 14, "15" should be deleted. Claim 25, "D/A" should be changed to "A/D", respectively, as D/A only generates analogue signal as oppose to digital signal. In addition, "can be" as recited in line 13, should be changed to "is". Claim 18, the limitation recited in lines 15-17 is not consistent with the limitation recited in lines 13-14 that recites that "a new decoding algorithm is installed in the processor". Claims 7-9, 23 and 26 are likewise objected because of their dependency to an objected claim. Correction is required

3. The drawings are objected to because "D/A" should be replaced by "A/D", in fig. 3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and

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where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: Page 6, description of fig. 3 section, "digital to analog" or "D/A" should be changed to "analog to digital" or "A/D".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 6-9, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow et al US Patent No. 6,243,572 in view of Davies et al US patent no. 6,646,993.

As per claim 6, Chow et al discloses a digital radio system (fig. 2) comprising a transmitter unit (see transmit path in fig. 2) including a transmitter programmable processor 232 (Note that DSP's are programmable devices) wherein the signal stream transmitted by the transmitter unit (transmit section) is encoded with encoding algorithm (234) installed in the DSP (transmitter programmable processor) and at least one receiver unit (see the received path of fig. 2) including apparatus for receiving the signal stream transmitted by the transmit section of fig. 2 (transmitter unit) and converting the signal stream into a digital format signal stream using element 254; a DSP 236 (receiver programmable processor) for decoding the digital format signal using a decoding algorithm 238 installed in the DSP (receiver programmable processor), wherein the decoding algorithm is provided inherently by the manufacturer of the receiver and transmitter. Note that in order to built the system the manufacturer has to select the parts according to system design. Hence the parts, including the decoding scheme, have to be provided/selected by the manufacturer of the system. However, Chow does not explicitly teach the additional limitations of "the encoding algorithm in the transmitter programmable processor specifies a transmission format and wherein an updated decoding algorithm permits the receiver unit programmable processor to decode the transmission format". Davies et al teaches the additional limitations of "the encoding algorithm in the transmitter programmable processor specifies a transmission

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format and wherein an updated decoding algorithm permits the receiver unit programmable processor to decode the transmission format" see col. 3, lines 1-43 and fig. 2. Given that fact, it would have been obvious to one skill in the art to incorporate such a limitations in Chow in order to provide the receiver with the enhance capability to demodulate and decode efficiently the received signal.

As per claim 7, it is well known in the art to use a control channel to transmit control information to remote system. Given that, it would have been obvious to one skill in the art to use a control channel to send the updated information to the receiver so as to ensure that information signal and format information arrive at the receiver at about the same time so as to minimize signal processing delay.

As per claim 8 it would have been obvious to one skill in the art to update the receiver using a dual mode transmission for better performance.

As per claim 9, it would have been obvious to one skill in the art to set the two transmission mode as the old transmission format and the new transmission format so as to ensure that the transmission parameters are effectively updated.

As per claim 11, see claim 6 above and in addition note that the decoding algorithm has to be converted in digital form prior to being processed by the receiver circuitry and the reason to do so would have been to shape the signal in a format compatible with the DSP.

As per claim 14, the encoding and decoding refer to algorithms to encode and decode a transmission format (signal) see Chow fig. 2.

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7. Claims 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chow et al in view of Davis et al and further in view of Johnson et al US Patent No. 6,031,867.

As per claim 18, Chow teaches the receiver unit includes antenna 267 for receiving a signal stream from a transmitter unit see fig. 2; a receiver unit for converting the signal stream into a digital format signal stream using element 254; a DSP 236 (receiver programmable processor) for decoding the digital format signal using a decoding algorithm 238 installed in the DSP (receiver programmable processor); wherein the decoding algorithm is provided inherently by the manufacturer of the receiver and transmitter. However, Chow does not explicitly teach the further limitation of "when the digital stream requires a different decoding algorithm for decoding, the programmable processor installs a new decoding algorithm therein". In addition Chow does not explicitly teach the further limitation of "an output device wherein, when the programmable processor determines that the new decoding algorithm is not installed therein, a user is alerted by signals applied to the output device, the user obtaining the new decoding algorithm and installing the new decoding algorithm in the programmable processor". Davis teaches the further limitation of "when the digital stream requires a different decoding algorithm for decoding, the programmable processor installs a new decoding algorithm therein see abstract. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Chow et al so as to take advantage of the ever increasing technological advances with respect to coding see col. 3, lines 12-14. Note that it is well known in the art for processor to alert user that a program is

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outdated or a password is expired or about to be expired so that the user can take appropriate action given that fact, it would have been obvious to one skill in the art to program the processor in such a way as to alert the user to update a old decoding program so as to take advantage of new technological advances and to enhances decoding performance since current program always works better than the one the are replaced. In addition, note Johnson et al col. 8, lines 12-16 and lines 42-47 where a user is obtain and install a new decoding algorithm from a remote device. Given such a disclosure, it would have been obvious to one skill in the art to incorporate such a teaching in Chow et al and Davis in order to take advantages of technological advances and at the same time provide a convenient way for the user to get program upgrade without waiting for a technician to perform the upgrade that would also charge a premium for the service.

As per claim 23, Chow teaches a DSP 236 (receiver programmable processor) for decoding the digital format signal using a decoding algorithm 238 installed in the DSP (receiver programmable processor) is the decoding algorithm is for decoding a transmission format (transmission signal).

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen US patent No. 6,671,292I in view of Herring US Patent Publication S/N US 2002/0001317A1.

Haartsen teaches a transmitter fig. 3 comprising a digitizer 312 (an A/D converter) responsive to analog input signals "IN", the digitizer 312 (A/D converter) providing a digital representation of the analog input signals "IN"; a format encoding unit

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314 coupled to the digitizer 312 (A/D converter), the format encoding unit for controlling the encoding a transmission format of a broadcast transmission according to a transmission format encoding algorithm, wherein the transmission format encoding algorithm can be updated see col. 9, line 58-col. 10, line 20. However, Haartsen fails to teach the further limitations of "an up-converter and power amplifier unit for processing signals from the format encoding unit and antenna for broadcasting signals from the up-converter and power amplifier unit" Herring teaches the further limitations of an up-converter 80 and power amplifier unit 100 for processing signals from the format encoding unit 30 and antenna 115 for broadcasting signals from the up-converter 80 and power amplifier unit 100. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Haartsen in order to shape the signal in a format suitable for high frequency transmission.

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen US patent No. 6,671,292I in view of Herring US Patent Publication S/N US 2002/0001317A1 and further in view of Davies et al US patent No. 6,646,993.

As applied to claim 25 above, Haartsen and Herring disclose every feature of the claimed invention but does not explicitly teach the further limitations of broadcasting the decoding algorithm and transmission format algorithms to a receiver unit of the digital radio. Davies et al teaches the transmission of decoding algorithm and transmission format to a receiver see col. 3, lines 1-43. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Haartsen and Herring in order to


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provide the receiver with the enhance capability to demodulate and decode efficiently the received signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jean B Corrielus
Primary Examiner
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2-1-07